FOCUSED SITE INSPECTION PRIORITIZATION
SITE EVALUATION REPORT

TARACORP INDUSTRIES
MCCOOK PLANT
7753 WEST 47TH STREET
McCOOK, ILLINOIS

CERCLIS ID NO.: ILD098983208

Prepared for:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
SITE ASSESSMENT SECTION
77 West Jackson Boulevard
Chicago, Illinois 60604

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Technical Direction Document No.:	T05-9503-239
Prepared by:	Ecology and Environment, Inc. Linda Knorz
E & E Program Leader:	Steven Skare
Telephone No.:	(312) 663-9415

ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

-0570

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1. INTRODUCTION

The Ecology and Environment, Inc. (E & E), Technical Assistance Team (TAT) was assigned by the United States Environmental Protection Agency (U.S. EPA), under Contract No. 68-W0-0037, Technical Direction Document (TDD) No. T05-9503-239, to evaluate the Taracorp Industries site in McCook, Cook County, Illinois as a potential candidate for the National Priorities List (NPL). E & E performed Focused Site Inspection Prioritization (FSIP) activities to determine whether, or to what extent, the site poses a threat to human health and the environment, and has prepared this FSIP report. The report presents the results of E & E's evaluation and summarizes the site conditions and targets pertinent to the migration and exposure pathways associated with the site. Background information was obtained from various resources including a Preliminary Assessment (PA) report prepared by the Illinois Environmental Protection Agency (IEPA), a Site Screening Inspection (SSI) report conducted by the U.S. EPA contractor, E & E, a Site Assessment including sample collection by the U.S. EPA TAT contractor, Roy F. Weston, Inc., and personal communications with state and local agencies.

This report is organized into six sections, including this introduction. Section 2 describes the site and provides a brief site history. Section 3 provides information about previous investigations conducted at the site. Section 4 provides information about the four migration and exposure pathways (groundwater migration, surface water migration, soil exposure, and air migration). Section 5 is a summary of the FSIP. References used in the preparation of this report are listed in Section 6.

2. SITE DESCRIPTION AND HISTORY

The Taracorp Industries site is located at 7753 West 47th Street, in McCook, Cook County, Illinois (sec. 12, T. 38 N., R. 12 E.). The coordinates of the site are latitude 41°48'06" North and longitude 87°48'57" West (E & E 1986). Taracorp Industries ceased operations as a secondary lead smelter in 1983. The site is currently owned by J&F Hauling and used to stockpile demolition debris until it is transported off site (IEPA 1995). The land use surrounding the site is a mix of industrial, commercial, and residential areas. The southern perimeter is bordered by railroad tracks with a drainage ditch flowing between the railroad tracks and site. Salvage yards are situated on both the east and west sides of the site. A vacant lot is located on the north border. The nearest residential area is 200 feet from the site and the population within one mile of the site is approximately 10,000 persons (E & E 1986). The site location is shown on Figure 2-1.

The site is situated on approximately 6 acres of flat land, and is mainly covered with buildings, gravel, and/or pavement. Site features are shown in Figure 2-2. The Des Plaines River, the nearest surface water body, at its nearest point to the site, is located approximately 0.16 mile south of the site. The ditch running along the south perimeter drains into the Des Plaines River approximately 0.5 miles from the site. The Chicago Sanitary and Ship Canal is located 0.47 mile south of the site.

Taracorp Industries operated as a secondary lead smelter from 1979 to 1983. This process consisted of recycling lead from scrap materials and battery plates to produce metallic lead ingots. The battery plates were purchased from off-site sources and were received pre-broken. This material was sent through the smelting process and allegedly no sulfuric acid was present on the plates so acid neutralization was not necessary. Battery plates and scrap material were stored in bins on a concrete pad within a storage shed. The material was fed

into the reverbatory furnace and smelted into lead bullion form. Pot furnaces were used to re-refine the bullion and produce lead ingots. The hot gasses from the reverbatory furnace were directed through a series of cyclones and then into a baghouse. Flue dust was screw-conveyed back to the reverbatory furnace. During breakdown periods, the flue dust was stored in open-top bins in a roofed storage shed. Slag from the reverbatory furnace was allegedly the only waste generated from the lead smelting process. The slag contained lead and was shipped off site to other Taracorp facilities to be used in blast furnace operations. The slag was stored in the storage shed or in covered bins until shipment off-site (E & E 1986).

Prior to Taracorp Industries ownership, the site was owned and operated by National Lead Industries, Inc. (NL Industries), who also operated the facility as a secondary lead smelter from the mid-1960s until it was sold in 1979 (E & E 1986). The Taracorp Industries site is surrounded by a eight-foot high cyclone fence and during its operating years was occupied 24-hours a day. Buildings at the site include: a main office, a warehouse, a storage shed which is roofed and open on two sides, a production area which includes the reverbatory furnace, a screw conveyor, a cooling tower, two cyclones, and a baghouse. No aboveground or underground storage tanks were observed at this site during past state and/or federal investigations.

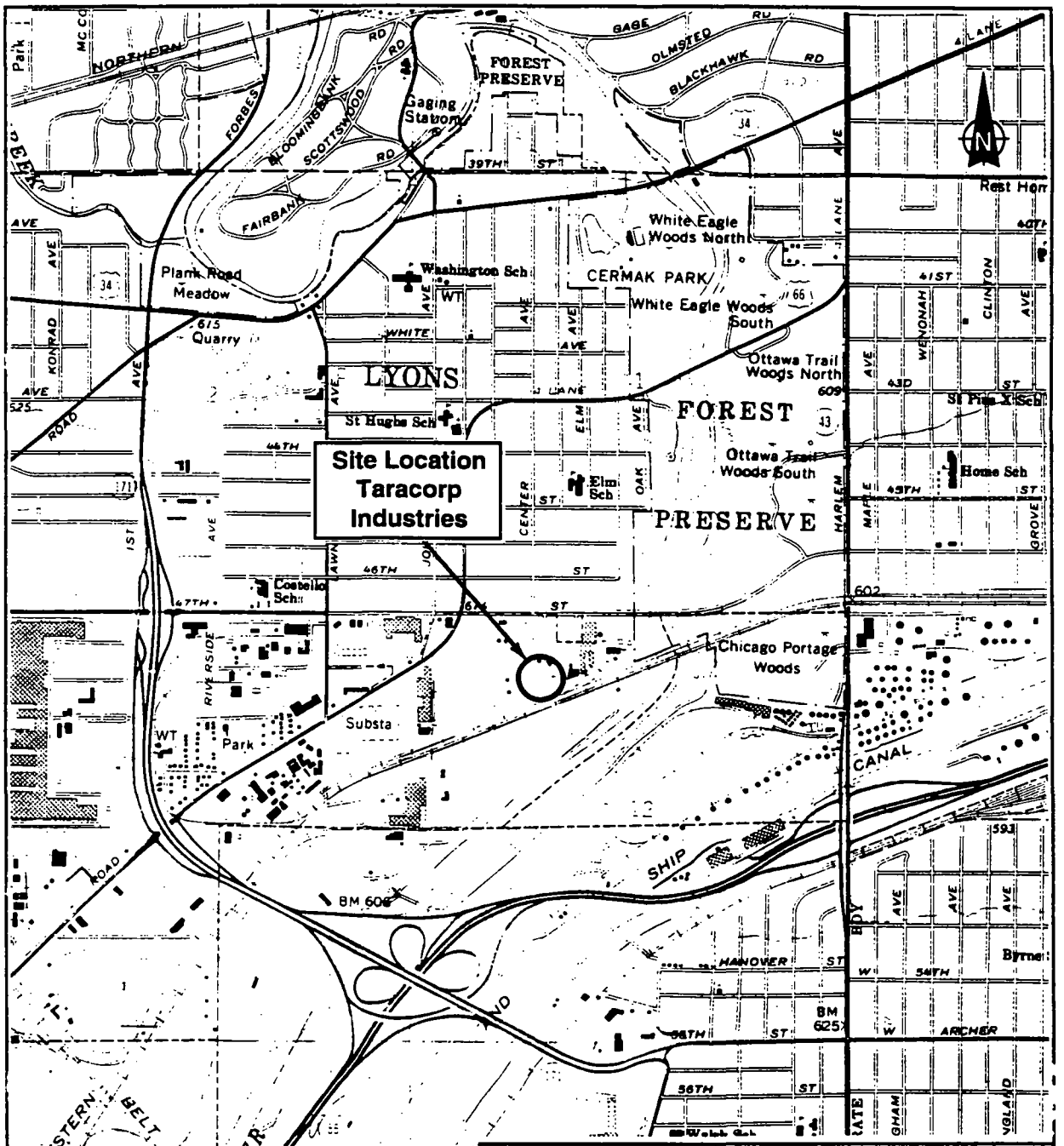
In the mid-1980s, the front half of the property was leased to Moreco Energy, Inc. and used as a truck terminal and maintenance garage. The rear portion of the site was used for parking motor oil refining trucks. Trucks entering the site were usually empty. The used oil was loaded into tanks off site at Moreco's Refinery (E & E 1986). The exact dates of Moreco's lease is unknown.

In the late-1980s, the site was leased to J&F Hauling, a construction demolition company. In 1990, the Taracorp Industries property was purchased by J&F Hauling and is listed as the current owner (IEPA 1995). No regulated wastes are used by J&F Hauling, nor are any special waste permits required under the current operations of the site (IEPA 1995).

Taracorp Industries occupied the site from 1979 to 1983. In 1980, Taracorp Industries submitted the Part A Permit Application under the Resource Conservation and Recovery Act (RCRA) for storage of baghouse dust (Waste Code K069) in 55-gallon drums. In 1983, the facility ceased operations due the depressed market conditions for secondary lead ingot products. Approximately one year later, all materials were eventually removed from the

site and the plant yard, buildings, walls, and baghouse were vacuum swept. This material was shipped off site for recycling (E & E 1986). In December 1985, Taracorp Industries withdrew it RCRA application, stating that K069 baghouse dust once stored in a waste pile, is not a solid waste and was never discarded. In November 1987, the U.S. EPA withdrew its complaint against Taracorp Industries on the basis that material generated at the site was recycled back to the original production process and therefore, not a discarded material under RCRA (Rooks 1987).

Taracorp Industries did not have a National Pollutant Discharge Elimination System (NPDES) permit during its four years of operation (E & E 1986).



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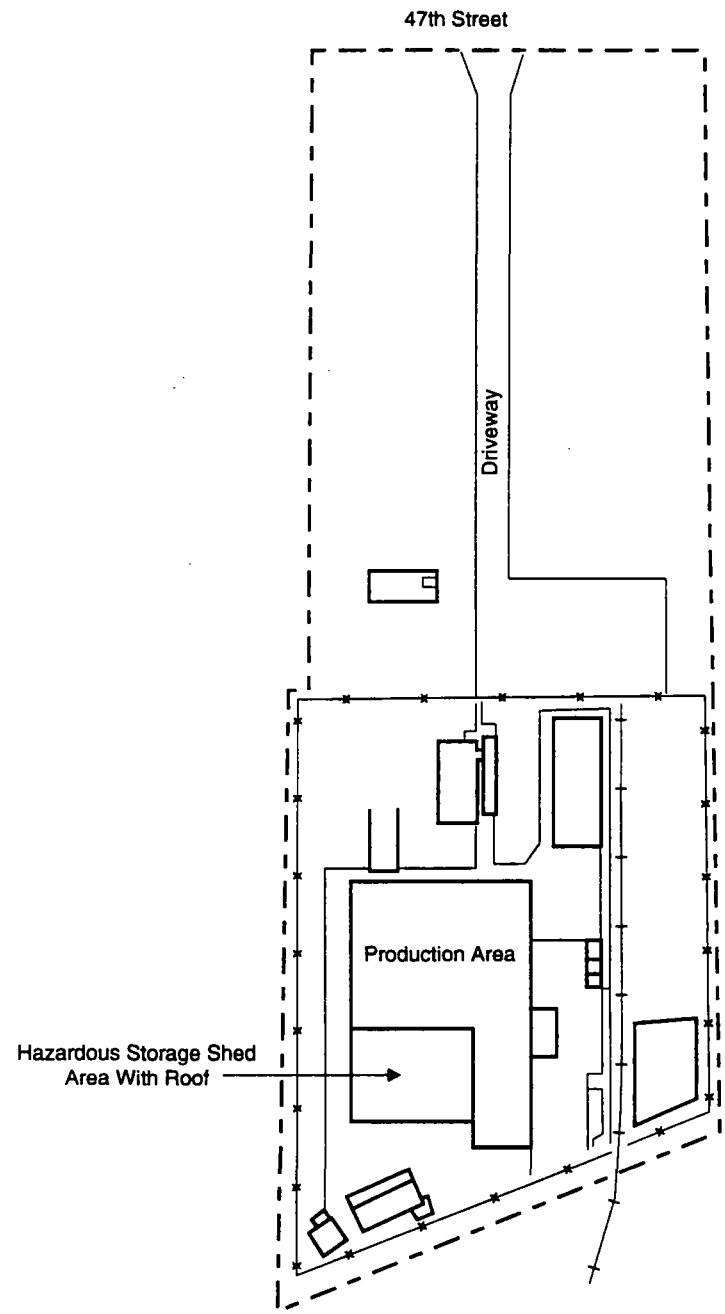
Region V

TITLE	Site Location Map	FIGURE#	2-1
SITE	Taracorp Industries	TDD#	T05-9503-239
CITY	McCook	STATE Illinois	SCALE 1:24,000
SOURCE	Ecology and Environment, Inc. 1995; USGS 7.5 Minute Series (Topographic) Quadrangle: Berwyn, IL 1963; photorevised 1972 and 1980	DATE	1963
		REVISED	1995

02: TAT\ZT305172.CDR



LEGEND:

- Site Boundary
- Fence
- Railroad Tracks

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Region V

TITLE	Site Features Map		FIGURE# 2-2
SITE	Taracorp Industries		TDD# T05-9503-239
CITY	McCook	STATE Illinois	SCALE Not to Scale
SOURCE	C.J.P./File		DATE 1986 REVISED 1995

3. PREVIOUS INVESTIGATIONS

In 1973, when the site was owned by NL Industries, the IEPA conducted a site inspection because of a citizens complaint of an offensive sulfur odor emitted from the plant (IEPA 1973). The emissions were allegedly emanating from lead sulfate and sulfite on old battery plates that were reclaimed during process operations (E & E 1986). In 1979, NL Industries sold the plant to Taracorp Industries. However, NL Industries filed a U.S. EPA 103(c) Notification of Hazardous Waste Site Form in 1980.

On May 26, 1983, the IEPA conducted a site inspection of the facility to document site conditions and collected two samples from the Taracorp Industries site: a dust sample from a storm sewer grate outside the storage shed area which detected a lead concentration over 400,000 milligrams per kilogram (mg/kg) and a water sample collected from ponded water inside the storage shed which detected 12.71 milligrams per liter (mg/L) of lead (IEPA 1983).

In August 1984, the IEPA performed a PA at the Taracorp Industries facility. The inspectors noted ponding of water in the storage shed, also cracks and missing pieces of concrete in this storage shed. The IEPA assigned a medium priority to this site because of the large population potentially affected and the presence of a school within 0.3 mile of the site (IEPA 1984).

On September 9, 1986, a CERCLA SSI was conducted by the U.S. EPA Field Investigation Team (FIT) contractor, E & E, which included a site walk-through and interviews with the site representative. Photographs and visual observations of the site were made. The SSI stated that Taracorp Industries had problems in the past with the Metropolitan Sanitary District of Greater Chicago (MSDGC) regarding lead contamination. According to an interview with the site representative, Taracorp Industries split samples with MSDGC;

chemical analysis of the Taracorp Industries samples showed lead concentrations to be in compliance with MSDGC regulations, while analysis from the MSDGC samples revealed non-compliance by a small margin. No sample location or analytical data of this sample event was referenced in the SSI report (E & E 1986).

On August 28, 1986, the TAT contractor, Roy F. Weston, Inc., conducted a site assessment and collected soil and surface water samples at the Taracorp Industries facility. The TAT did not find any conditions that would clearly indicate an emergency situation (E & E 1986). A total of twelve samples were collected including one method blank. The soil samples were analyzed for total metals; in addition, two samples, S01 and S04, were analyzed for Extract Procedure (EP) toxicity metals. The results indicated that sample S01 was EP toxic for lead at 1,290 mg/L and cadmium at 5.66 mg/L and sample S04 was EP toxic for lead at 500 mg/L (Weston 1986). The TAT Site Assessment report along with the sample location map and sample results are shown in Appendix A. The TAT determined that an immediate threat to the general population was low due to the inaccessibility of the site, however, heavy metal concentrations in the soil posed a threat to workers on site not utilizing proper respiratory protection. There also exists the potential for migration of pollutants off site through wind and water erosion (Weston 1987). No monitoring wells have been installed to date at this site.

4. MIGRATION AND EXPOSURE PATHWAYS

This section describes the four migration and exposure pathways associated with the Taracorp Industries. Section 4.1 discusses the groundwater migration pathway; Section 4.2 discusses the surface water migration pathway; Section 4.3 discusses the soil exposure pathway; and Section 4.4 discusses the air migration pathway.

4.1 GROUNDWATER MIGRATION PATHWAY

This section discusses site-specific geology and soils, groundwater releases, and targets associated with the groundwater migration pathway at the site.

4.1.1 Geology and Soils

The Taracorp Industries site is located in a relatively flat area of greater Chicago. Lying beneath the site is 25 to 40 feet of unconsolidated glacial material. The glacial material is underlain by Silurian dolomite bedrock. The unconsolidated glacial deposits are primarily alluvial in origin and consist largely of fine grained clayey silts and silty sandy clays.

Groundwater aquifers in the area include the Shallow Dolomite Aquifer, mainly Silurian dolomite; the Cambrian-Ordovician Aquifer, in which the Ironton-Galesville and Glenwood-St. Peter Sandstones are the most productive units; and the Mt. Simon Aquifer, which consists of the Mt. Simon Sandstone and the basal sandstone of the Eau Claire Formation (Suter 1959).

Shallow aquifers are connected hydrologically and are recharged directly through seepage and precipitation. They are separated by relatively impervious Maquoketa Group Shale from the Cambrian-Ordovician Aquifer (Willman 1971).

The residents of the city of McCook obtain drinking water from a municipal system that draws water from Lake Michigan intakes, approximately 3 miles east of the site (Weist 1995).

4.1.2 Groundwater Releases

A release of hazardous substances from the Taracorp Industries site to groundwater is unlikely based on site conditions at the time of the SSI. The baghouse dust generated at the site was recycled back into the smelting process, and during intermediate periods of shut down, the waste would be stored on a concrete pad in a storage shed. No monitoring wells have been installed at the site to date, therefore, no groundwater data is available.

4.1.3 Targets

The residents of McCook obtain drinking water from a municipal system which receives water from Lake Michigan. It was reported in the 1986 SSI, that private wells were used for drinking water in the city of Lyons, located within one mile north of the site (E & E 1986). Based on a telephone conversation with the City of Lyons Municipal Water Supply manager, as of 1986, when the last well was taken out of commission, all city residents obtain their drinking water from Lake Michigan (E & E 1995).

4.2 SURFACE WATER MIGRATION PATHWAY

It is unlikely that a release to surface water has occurred because of berms constructed by Taracorp Industries along the fence lines on the south and west sides to prevent runoff to the drainage ditch which empties into the Des Plaines River (E & E 1986). No samples have been collected from this drainage ditch. Approximately 145,000 persons utilized drinking water obtained from Lake Michigan.

The Des Plaines River, the nearest surface water body, is located approximately 0.16 miles south of the site and is used for recreational purposes. The site is located outside the 100-year flood plain of Des Plaines River (E & E 1986). No wetlands, sensitive environments, or drinking water intakes are known to exist along the Des Plaines River (E & E 1986).

4.3 SOIL EXPOSURE PATHWAY

A release of hazardous substances from the Taracorp Industries site to surrounding soils is possible. During Taracorp Industries' four years of operation, as well as during NL Industries operation from the mid-1960s to 1979, the site used lead-bearing materials such as broken battery plates and casings as feedstock in the smelting process. It is likely that lead material could have migrated to the surrounding soils via movement of this material by equipment (i.e., front end loaders).

In May 1983, soon after the facility ceased operations, the IEPA collected two samples; chemical analysis of a dust sample from a sewer grate outside a storage shed revealed lead at 412,250 mg/kg, and chemical analysis of a water sample from ponded water on the storage shed floor revealed lead at 12.7 mg/L (IEPA 1983).

In August 1986, the TAT contractor, Roy F. Weston, Inc., collected 12 samples from the Taracorp Industries facility (see Appendix A for locations and analytical results). Two samples analyzed for EP toxicity metals exceeded the maximum concentrations for lead and one sample exceeded the maximum concentration for cadmium.

On-site soils consist mostly of gravel with sand. The subsurface layer consists of unconsolidated glacial drift material consisting of gravel and silty clay (E & E 1986). Access to the site is restricted by a 8-foot high cyclone fence. During Taracorp Industries operational years, there was 24-hour occupancy of the site, and approximately 35 people worked at this facility. The nearest residential area is located less than 0.1 miles from the site; in addition, a school is located 0.3 miles from the site. No sensitive environments or wetlands exist within 4 miles of the site (E & E 1986).

4.4 AIR MIGRATION PATHWAY

The potential exists for a release of hazardous substances to air to have occurred. In 1973, when the site was owned by NL Industries, a citizens complaint was filed regarding an obnoxious sulfur odor which may have been attributable to the secondary smelting process (Letter 1973).

The potential for air contamination from fugitive lead dust was high in the past. In May 1983, the IEPA collected a dust sample from the Taracorp Industries site which revealed lead concentration exceeding 400,000 mg/kg (IEPA 1983). In 1984, a year after smelting

operations ceased, all material was removed from the site decreasing the potential for contamination migration.

Approximately 35 workers were employed at Taracorp Industries during its operation from 1979 to 1983 (E & E 1986). The population surrounding the site is relatively high, with approximately 145,000 persons within a 3-mile radius of the site (E & E 1986). No wetlands or sensitive environments exist within 4 miles of the Taracorp Industries site (E & E 1986). During its operation, Taracorp Industries installed equipment to control air emissions, including cyclones and a baghouse collection system.

5. SUMMARY

E & E has evaluated the Taracorp Industries site using the existing IEPA and U.S. EPA files, various state information services, and personal communications. The Taracorp Industries facility has been an inactive facility since 1983, when it ceased operations due to depressed market conditions for secondary lead products (E & E 1986). The site was used to recycle lead scrap materials and battery plates to produce lead ingots. The site is now owned by J&F Hauling, a construction demolition company. On-site sampling activities have occurred twice in the past. In 1983, the IEPA collected two samples, a dust sample from a storm sewer grate which contained over 400,000 mg/kg of lead and a water sample from a ponded area inside the storage shed which was found to contain 12.71 mg/L of lead. In 1986, the Weston TAT collected a total of 12 soil and water samples from the site. Analytical results indicated that EP Toxicity maximum concentrations were exceeded for lead in two samples and for cadmium in one sample.

The city of McCook obtains drinking water from Lake Michigan, and no residents rely on groundwater wells for drinking water. The release of hazardous substances from the site to the groundwater is unlikely based on site conditions at the time of the SSI.

A release of hazardous substances to surface water is unlikely. The Des Plaines River, the nearest surface water body, is located approximately 0.16 miles south of the site. A drainage ditch exists on the south border of the site, which drains into the river approximately 0.5 miles south of the site. However, berms have been put in place to prevent surface runoff from the facility from reaching this ditch. The Taracorp Industries site is restricted to public access by a 8-foot cyclone fence. The site is located in a commercial, industrial, and residential area in the City of McCook. The nearest residence is less than 0.1

miles from the site, and there is a school located 0.3 miles north of the site (E & E 1986). No known sensitive environments are located near the site.

The potential exists for a release of hazardous substances to air to have occurred during Taracorp Industries four years of operation. In 1973, when NL Industries owned the site, a citizens complaint was filed regarding an obnoxious sulfur odor from the smelting operations (IEPA 1973). During state and federal inspections of the site throughout the 1980s, air monitoring equipment did not indicate that a hazardous air condition existed. Approximately 35 workers were employed at the site from 1979 to 1983. Also, no sensitive environments that could potentially be affected by releases from the site are located within 4 miles of the site.

6. REFERENCES

Note: References not included in Appendix B: documents that are currently available within U.S. EPA files; copyright documents that are currently available in E & E's library, maps produced by either the United States Geologic Survey or the Illinois State Geologic Survey; and documents that are created by the various state agencies for public use.

Ecology and Environment, Inc. (E & E), September 19, 1986, *Site Screening Inspection Report for Taracorp Industries, McCook, Illinois, CERCLIS ID No. ILD098983208*, Chicago, Illinois.

Finley, Richard, June 27, 1995, IEPA, Land Division Manager, Maywood, Illinois, personal communication with Linda Knorz (E & E), Chicago, Illinois.

Illinois Environmental Protection Agency (IEPA), June 9, 1983, Memorandum, sampling activities on May 26, 1983, Springfield, Illinois.

Roy F. Weston, Inc. (Weston), January 19, 1987, Site Assessment Report of Taracorp Facility, Chicago, Illinois.

Suter etal, 1959, *Preliminary Report, Groundwater Resources at the Chicago Region, Illinois, Cooperative Groundwater Report I*, Illinois State Water Survey and Illinois State Geologic Survey.

Weist, Dick, June 23, 1995, City of Lyons Water Supply Manager, personal communication with Linda Knorz (E & E), Chicago, Illinois.

Willman, H.B., 1971, *Summary of the Geology of the Chicago Area*, Illinois State Geological Survey.

APPENDIX A

WESTON SITE ASSESSMENT REPORT

REFERENCE #20
SITE NAME Taracorp Ind.
SITE ID ILD099893205

file

copy to W. Francis, RCRA

WESTON • SPER
Suite 1501, Northbrook Office Court
666 West Dundee Road, Northbrook, IL 60062 • 312 498-9091

TECHNICAL ASSISTANCE TEAM FOR EMERGENCY RESPONSE REMOVAL AND PREVENTION
EPA CONTRACT 68-01-6669

Mr. Michael Strimbu, Chief
Waste Management Division
Emergency Response Section
U.S. Environmental Protection Agency
11th Floor
230 South Dearborn Avenue
Chicago, Illinois 60604

January 19, 1987

TAT-05-F-01255

Re: Site Assessment of the TaraCorp Facility
McCook, Illinois
TDD# 5-8701-18 (FY 87)
TDD# 5-8612-49 (FY 87)
TDD# 5-8610-63 (FY 86)
TDD# 5-8608-01 (FY 86)

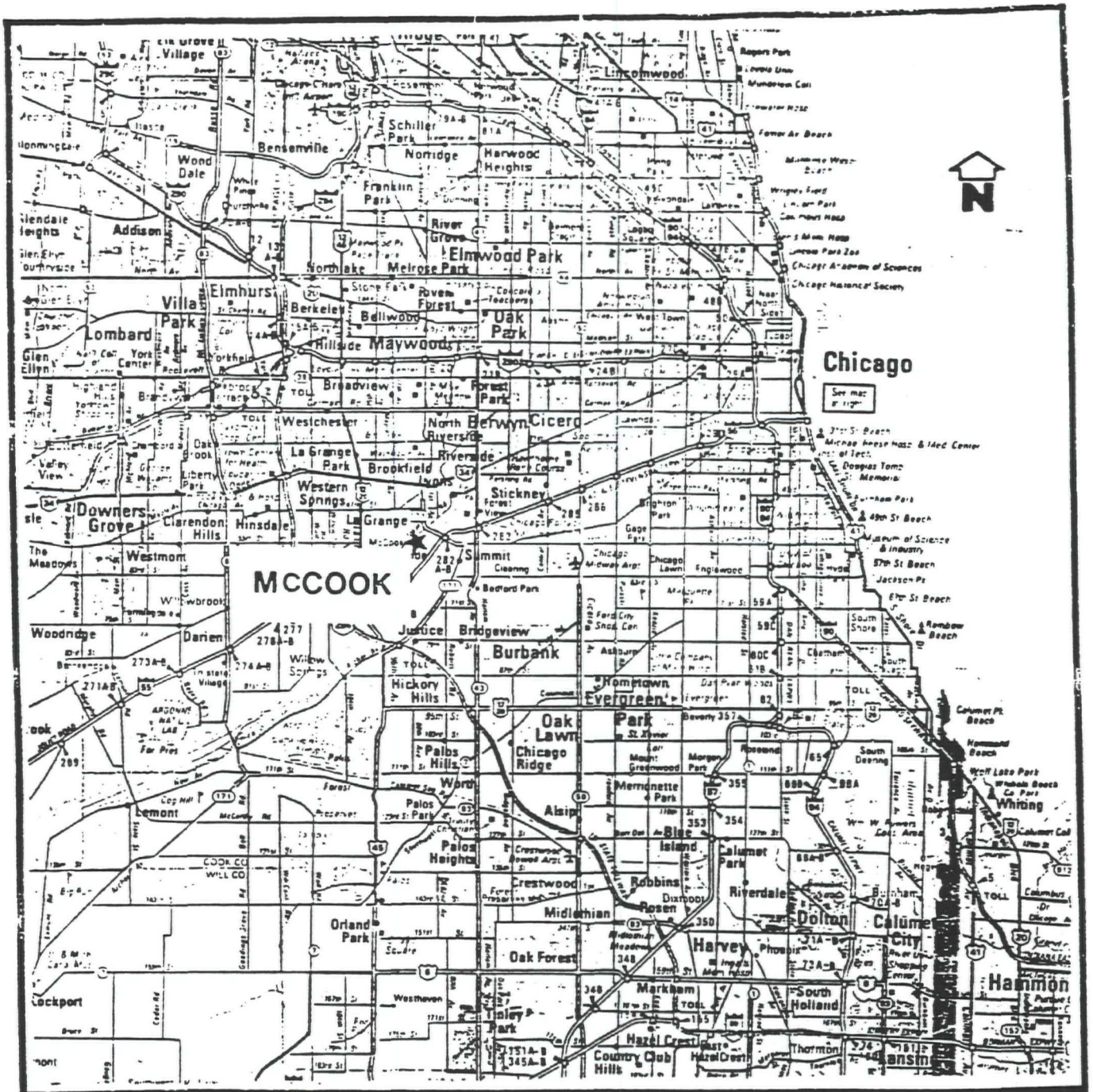
Dear Mr. Strimbu:

The U.S. Environmental Protection Agency (U.S. EPA) tasked the Region V Technical Assistance Team (TAT) on August 6, 1986, to perform an inspection of the TaraCorp Industries' facility in McCook, Illinois. The findings and analytical results of samples collected by the TAT during the inspection are presented in this letter report.

The TAT conducted the site assessment of the TaraCorp property located at 7900 West 47th Street, McCook, Illinois, on August 28, 1986 (Figure 1). On August 6, 1986, the TAT was directed by Robert Bowden, U.S. EPA Region V Emergency Response Section Chief, to perform the site assessment after the U.S. EPA was notified by Emil T. Sergo, Mayor of McCook, of his concern about lead contamination at the site.

The McCook site is owned by TaraCorp Industries and was used to recycle lead-bearing scrap materials to produce metallic lead ingots. TaraCorp ceased lead reclamation operations at this facility in March 1984. The facility is presently being leased by Moreco Energy, Inc., which uses the property for maintenance and storage of waste oil tanker trucks.

Information about the history of the site was obtained from the Illinois Environmental Protection Agency (IEPA); most of the details were excerpted from a memo written by Cliff Gould,



SOURCE: STATE OF ILLINOIS

FIGURE 1

SITE LOCATION MAP

SCALE

TARACORP, INC.

McCOOK, ILLINOIS

1/7/87 WHS TO EF

WESTON
DESIGNERS CONSULTANTS

Acting Manager, IEPA Land Pollution Division, on February 25, 1986. The information from the memo included:

- Three processes used by TaraCorp, Inc. for the secondary smelting of nonferrous metals (SIC 3341) were identified on the November 18, 1980, Part A RCRA form 3510-3 submitted to IEPA. These processes were: a reverberatory furnace that smelted lead bearing materials into metallic lead to be cast into ingots; a pot furnace (kettles) where materials were melted directly to produce lead ingots; and a waste pile where material was stored for later smelting.

- Site visit observations on March 29, 1983, by Rico Vallipara of the IEPA Division of Air Pollution Control, indicated that flue dust and dross comprised the bulk of raw material in the storage area. Notes by Mr. Vallipara also indicated that contaminated water may run off the storage area during a rain if the wind was from the south or west, the exposed sides of the storage areas. The storage pad was also broken in many places.

- During a site visit on May 26, 1983, Lynn Crivello of the IEPA Division of Land Pollution Control, collected two samples. Lead levels of 412,250 ppm were detected in dust on the concrete near a Metropolitan Sanitation District (MSD) storm drain, and 12.71 ppm lead was detected in a sample from the ponded water on the storage pad.

- Approximately 20,000 pounds of flue dust and dross was delivered weekly from a plant in Granite City, Illinois to the TaraCorp facility in McCook, Illinois, and stored in a concrete pad storage area. The flue dust and dross was used as raw material for secondary smelting processes. The waste pile was operated until the suspension of production operations in early 1984. The remaining waste pile material was manifested and shipped to other secondary lead smelters in May 1984.

To date, TaraCorp has not submitted an approved closure plan for the McCook facility. The IEPA requested assistance from the U.S. EPA in April 1986 for enforcement of RCRA violations at the TaraCorp facility. The U.S. EPA issued TaraCorp a compliance order on August 1, 1986, for closure of the facility.

The site assessment was performed by TAT members William Scoville, Susan Lorenz, Sinnadurai Babusukumar, and Gene Foster. The TAT arrived at the McCook TaraCorp site on August 28, 1986, and met with George Webb of TaraCorp Industries and Ronald Stoker of Moreco Energies, Inc., to discuss the proposed site assessment activities. During a discussion about the sampling strategy, Mr. Webb requested that the TAT split samples as well as supply him with sample jars. The TAT informed Mr. Webb that sample splitting would not be possible because he had not notified the U.S. EPA or the TAT 24 hours in advance of the site inspection, although analytical data would be available to him through the U.S. EPA if he requested it. Messrs. Webb and Stoker also requested that they be present during the site inspection and sampling, which was agreed upon.

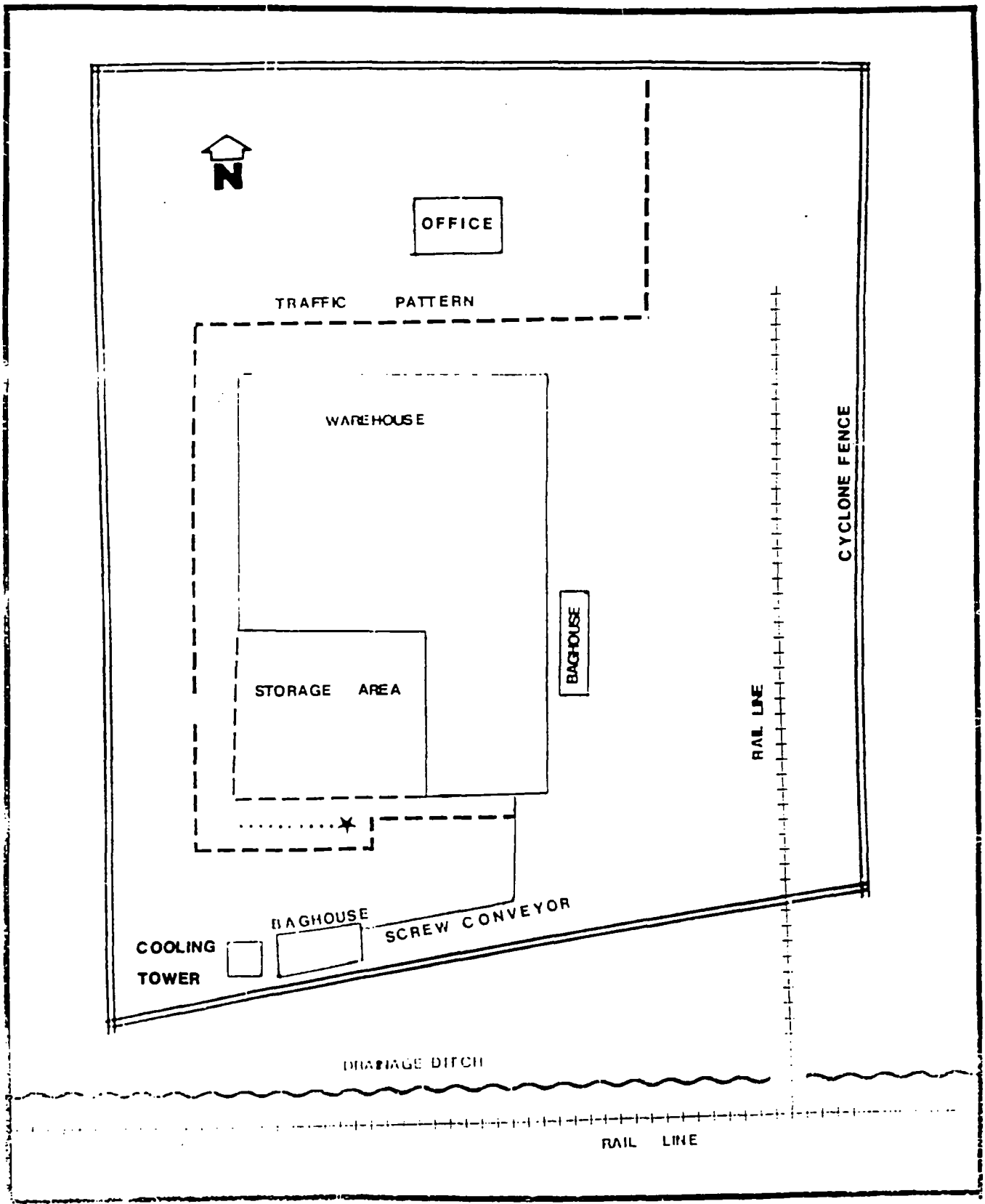
After the meeting adjourned, the TAT donned level C protection for site entry. Walter Francis of the U.S. EPA RCRA arrived at the site to join the site inspection team. Messrs. Francis, Webb, and Stoker with the TAT entered the site. TAT member Foster performed an inspection of the site perimeter.

The site borders were enclosed by an eight-foot high cyclone fence with salvage yards adjacent to the property on the east and west borders. The southern perimeter is bordered by railroad tracks with a drainage ditch flowing between the railroad tracks and the fenced perimeter. The drainage ditch discharges into the Des Plaines River approximately 1/2 mile from the site. A vacant lot is located between the northern perimeter of the site and 47th Street (Figure 2).

The TaraCorp facility was composed of an office, a warehouse, a storage pad, two baghouses, a cooling tower, a screw conveyor, and a rail spur. Moreco Energies, Inc., used the office and warehouse for maintenance and storage of waste oil tankers. It did not appear that any of the other structures were in use.

Observations made during the site inspection include:

- The concrete pad used for storing lead contaminated material measured approximately 85 feet x 75 feet and was covered by a roof. Walls protected the area on the north and east sides, but no walls were present on the south and west sides (Photograph 1). The concrete on the storage pad was cracked. Dust was also found on the storage pad.



SITE MAP

FIGURE 2

TARACORP, INC.

MCCOOK, ILLINOIS

LEGEND

★ METROPOLITAN SEWER DRAIN

NOT TO SCALE

1/19/87 WHS to EF

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- A storm sewer drain near the storage pad was plugged and standing water was observed along the storm grate leading to the storm sewer.
- Broken pieces of battery casings were found on the ground on the east side of the site (Photograph 10).
- A drainage ditch flowed within a few feet of the south perimeter of the facility (Photograph 7).
- No defined drainage patterns were detected leaving the site, but the property sloped towards the south and east, which was also the direction of the drainage ditch.
- Vegetation in the ditches along the site borders did not exhibit signs of stress (Photograph 7).

Soil samples were collected at locations listed in Table 1 and shown in Figure 3 and analyzed for total metals. Samples S01 and S04 were also analyzed for EP toxicity metals.

Soil samples were collected with a stainless-steel spatula that was decontaminated with acetone and a water rinse between sampling points. Samples S01 and S02 from the storage pad were collected as composite samples with a stainless-steel spatula and mixed in a stainless-steel mixing bowl. All other samples were collected as grab samples. Sample S12 was a field blank obtained by decontaminating the stainless-steel spatula as described above, and then pouring water over the spatula and collecting the rinsate in a sample jar for analysis.

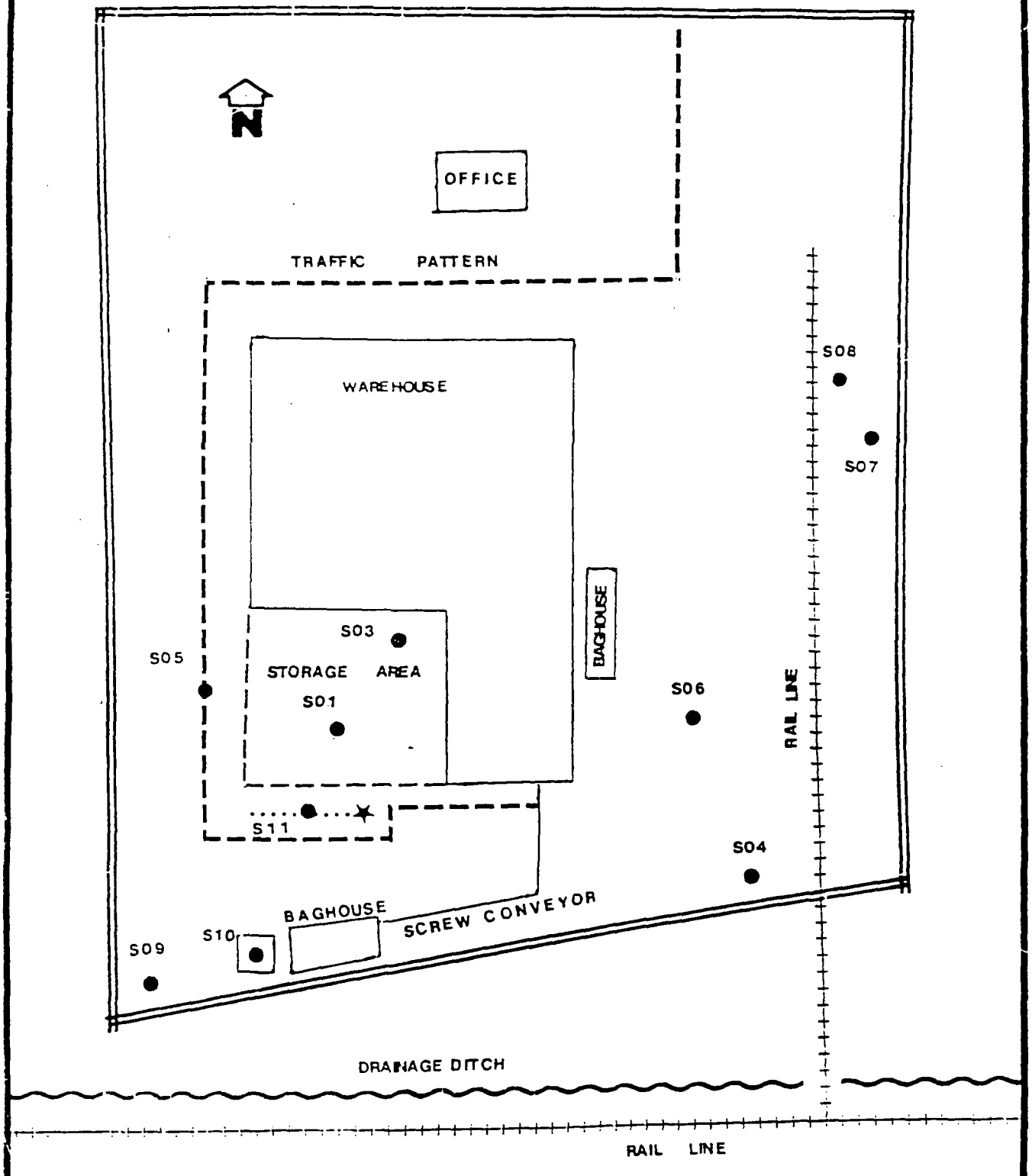
Samples S01, S02, S03 were classified as high hazard samples and were analyzed at Versar, Inc., Springfield, Virginia. All other samples were classified as medium hazard samples and were analyzed at Rocky Mountain Analytical Laboratories, Arvada, Colorado.

The Analytical results summarized in Table 2 indicate that the maximum levels of 12 elements exceeded the upper limit of the range for these elements in typical soils: the maximum levels for chromium, magnesium, and nickel were detected at levels less than 10 times the upper limit; the maximum levels for arsenic, copper, mercury, selenium, silver, and zinc were in a range between 10 times and 100 times the upper limit for typical soils; the maximum levels for antimony and cadmium were in a range between 100 times and 1000 times the upper limit for typical soils; and lead was detected at levels greater than 1000 times the upper

TABLE 1

SAMPLING NUMBERING SYSTEM
TARACORP, INC., MC COOK, ILLINOIS

Sample #	Sample Medium	Area Description
S02	Soil	Storage pad
S02	Soil	Duplicate of S01
S03	Soil	Cracks in storage pad
S04	Soil	Area SE corner of site
S05	Soil	Traffic way west of storage pad
S06	Soil	Area of broken battery casings east of warehouse
S07	Soil	Low area near fence along east border
S08	Soil	Area of broken battery casings near railroad spur
S09	Soil	Area at SW corner of property
S10	Water	Cooling tower
S11	Water	Storm grate south of pad
S12	Water	Method blank



SAMPLE LOCATION MAP

FIGURE 3

TARACORP, INC.

MCCOOK, ILLINOIS

NOT TO SCALE

LEGEND

● SAMPLES

1/19/87 WHS for EF

WESTON DESIGNERS CONSULTANTS

TABLE 2

SOIL SAMPLE ANALYTICAL DATA
TOTAL METALS ANALYSIS
TARACORP, INC., MC COOK, ILLINOIS
(Concentrations in mg/kg)

	Range of Typical Element Conc. in Natural Soils	S01	S02	S03	S04	S05	S06	S07	S08	S-09
Aluminum	100,000-300,000	10400	11700	7450	4650	742	2930	7430	2930	7780
Antimony	2-10	9840	7920	10600	5140	5330	5360	1340	4070	775
Arsenic	1-50	3330	3230	3330	1550	1890	857	615	1220	277
Barium	100-3000	598	391	268	331	261	649	253	424	201
Beryllium	0.1-40	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	0.01-0.7	541	527	227	148	120	83	48	16	37
Calcium	---	16000	25400	107000	*18300	*8060	*11300	*37000	*5570	*168000
Chromium	1-1000	240	107	29	39	6.9	26	54	25	3350
Cobalt	1-40	ND	ND	ND	6.7	ND	6	17	11	8.5
Copper	2-100	*8450	*5710	*1510	717	709	868	475	322	310
Iron	---	*10500	*13100	*10100	19900	6260	25300	25100	33500	44100
Lead	2-200	536000	450000	138000	289000	278000	500000	61500	641000	30000
Magnesium	600-6000	3540	8380	35700	*10100	*4170	*5210	*17000	*2670	*23900
Manganese	20-3000	128	195	308	DU	DU	DU	DU	DU	DU
Mercury	0.01-0.3	1.7	2.7	0.34	7.0	2.2	6.4	2.7	1.3	10
Molybdenum	0.2-5	ND	ND	ND	---	---	---	---	---	---
Nickel	5-500	1080	648	183	62	50	59	109	52	48
Selenium	0.1-2	22.4	ND	ND	DU	DU	DU	DU	DU	DU
Silicon	---	30700	31400	61500	---	---	---	---	---	---
Silver	0.01-5	ND	ND	ND	8.4	6.5	7.2	76	11	ND
Sodium	---	ND	ND	ND	ND	ND	ND	ND	ND	2440
Thallium	---	ND	ND	ND	18	ND	ND	ND	ND	ND
Tin	2-200	---	---	---	DU	DU	DU	DU	DU	DU
Titanium	---	471	539	ND	---	---	---	---	---	---
Vanadium	20-500	ND	ND	ND	8.2	ND	5.1	20	7.1	25
Zinc	10-300	3100	2280	2260	2150	584	1290	4150	752	5210

ND - Indicates element was analyzed for but not detected.
* - Estimated value.
DU - Data Unuseable.

limit for typical soils. The sample from the area of broken battery casings near the railroad spur (S08) contained the highest lead level at the site (68%).

Of the elements that exceeded the upper limit of typical soils, arsenic, cadmium, copper, magnesium, mercury, and silver are known to be toxic to human health and the environment.

Samples analyzed for EP toxicity exceeded the maximum concentration of contaminants for the characteristic of EP toxicity for lead and cadmium at sample station S01 and for lead at sample station S04 (Table 3). These soils exhibit a characteristic of EP toxicity and are, therefore, considered a hazardous waste according to the CFR Title 40 Chapter 1 Section 261.24.

Analytical results from the water samples are included in Table 2. Lead, the only metal found at significant levels above naturally occurring background levels for rivers, was detected at 62 ppm in sample S11 (Table 4).

The field blank (S12) analytical results detected trace amounts of copper (0.04 ppm), lead (0.03 ppm), and zinc (0.05 ppm) (Table 3). No significant levels of heavy metals in the field blank indicate that the decontamination procedures were appropriate and successful. They also indicated that there was no cross contamination between sample stations.

Based on site observations by the TAT and analytical results from the samples collected, the TaraCorp facility was found to pose the following actual and potential threats to human health and the environment as delineated within Section 300.65(b)(2) of the National Contingency Plan:

- Actual or potential exposure to hazardous substances or pollutants or contaminants by nearby populations, animals, or food chain;
- High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate;
- Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.

An immediate threat to the general population is low due to the inaccessibility of the site. However, metal concentrations in the soil pose a health risk to workers on site not utilizing

TABLE 3

EP TOX ANALYTICAL DATA
TARACORP, INC., MC COOK, ILLINOIS
(Concentrations in mg/l)

Metal	S01	S04	Maximum Concentration for EP Toxicity
Arsenic	0.097	*0.020	5.0
Barium	ND	0.067	100.0
Cadmium	5.66	0.651	1.0
Chromium	ND	ND	5.0
Lead	1,290	500	5.0
Mercury	ND	ND	0.2
Selenium	ND	DU	1.0
Silver	ND	ND	5.0

ND - Indicates element was analyzed for but not detected.
* - Estimated value.
DU - Data unuseable.

TABLE 4

WATER SAMPLE ANALYTICAL DATA
TOTAL METALS ANALYSIS
TARACORP, MC COOK, ILLINOIS
(Concentrations in mg/l)

	S10	S11	S12
Aluminum	ND	1.6	ND
Antimony	ND	1.640	ND
Arsenic	ND	0.320	ND
Barium	0.026	0.140	ND
Beryllium	ND	ND	ND
Cadmium	ND	0.467	ND
Calcium	*51.8	*69.6	*0.56
Chromium	ND	ND	ND
Cobalt	ND	ND	ND
Copper	0.048	.366	0.038
Iron	0.148	6.43	ND
Lead	0.09	62.0	0.034
Magnesium	9.81	14.2	ND
Manganese	ND	0.117	ND
Mercury	ND	ND	ND
Nickel	ND	0.043	ND
Selenium	ND	ND	ND
Silver	ND	ND	ND
Sodium	ND	9.46	ND
Thallium	ND	ND	ND
Tin	ND	0.332	ND
Vanadium	ND	ND	ND
Zinc	0.072	1.25	0.046

ND - Indicates element was analyzed for but not detected.
* - Estimated value.

proper respiratory protection. There also exists the potential for migration of pollutants off site through wind and water erosion.

The soil sample (SO5) from the traffic way had a lead concentration of 27.8% and arsenic concentration of 1,890 ppm. There exists the potential for migration of contaminants off site from vehicular traffic.

If there is sufficient water erosion from run-off during storm events, the aquatic life in the area could be adversely impacted. There is minimal threat to drinking water supplies due to the fact that the City of McCook obtains their drinking water from the City of Chicago.

Studies have shown observable increases in blood lead levels occur at soil-dust exposures of 500-1,000 ppm, A 3-6% increase in mean blood levels has been seen for a two-fold increase in soil lead levels. Thus, a significant risk to human life and health exists on the TaraCorp property where concentrations of lead were determined at 67,500 ppm. Inhalation is the worst type of direct exposure due to the body's ability to directly absorb the lead into the bloodstream via the lungs. Also, lead-contaminated particles can become trapped in the mucous membranes and be ingested.

Environmental exposure through respiration or ingestion can result in 10-15% absorption of the lead ingested in adults and up to 50% absorption of lead ingested by children. This absorption of lead can cause toxic effects in humans at low blood levels. Adverse health effects include: blood system dysfunction, psycho-neurologic dysfunctions, kidney dysfunctions and reproductive impairment. Anemia is considered to be the most toxic effect of low level lead poisoning. Children are most susceptible to psycho-neurological disorders and research has indicated blood levels as low as 0.5-0.6 mg/l can cause significant effects. Kidney diseases have been reported in industrial workers exposed to lead and older adults exposed to lead as children. Lead exposure has also been associated with increased rates of stillbirth, miscarriage, and premature delivery.

In order to minimize the threats posed by the lead contamination at the TaraCorp site, the TAT recommends the following be implemented:

- Vehicular traffic be curtailed or vehicles be decontaminated before exiting the site;

- Employees in the area should don appropriate respiratory protection and decontaminate footwear and clothing prior to exiting the site;
- Additional soil samples should be collected from the area to define the extent of contamination;
- Sediment samples and water samples should be taken from the drainage ditch that flows along the southern border of the site to determine if there is pollutant migration off site;
- Appropriate RCRA regulations should be enforced for proper closure of the facility.

Should you have any questions or require additional information, please feel free to contact us.

Very truly yours,

ROY F. WESTON, INC.

E. F. Scarb

For Eugene Foster
Environmental Scientist

Sally Matz

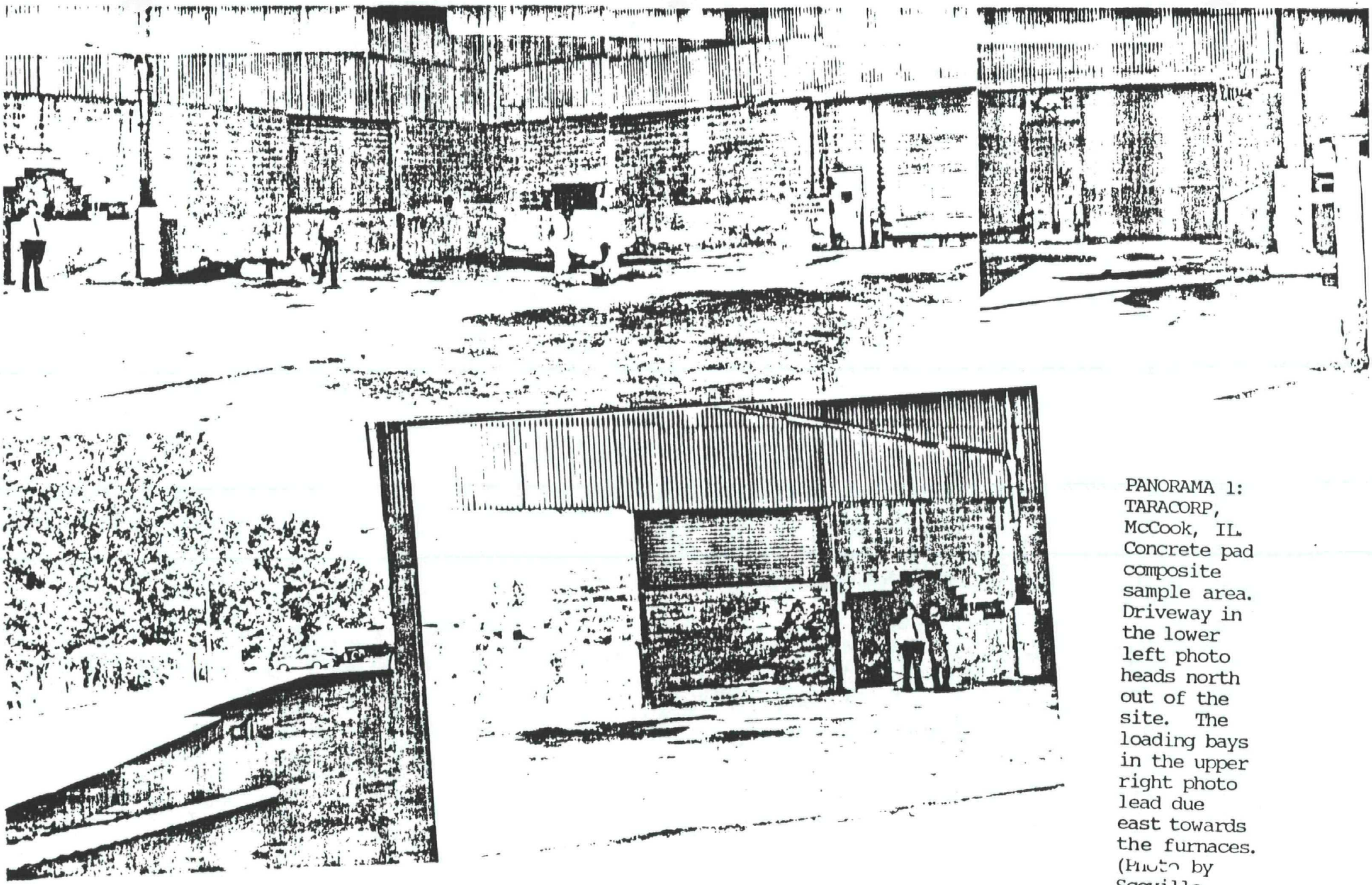
For Scott Springer
Technical Assistance Team
Leader, Region V

EF:ap

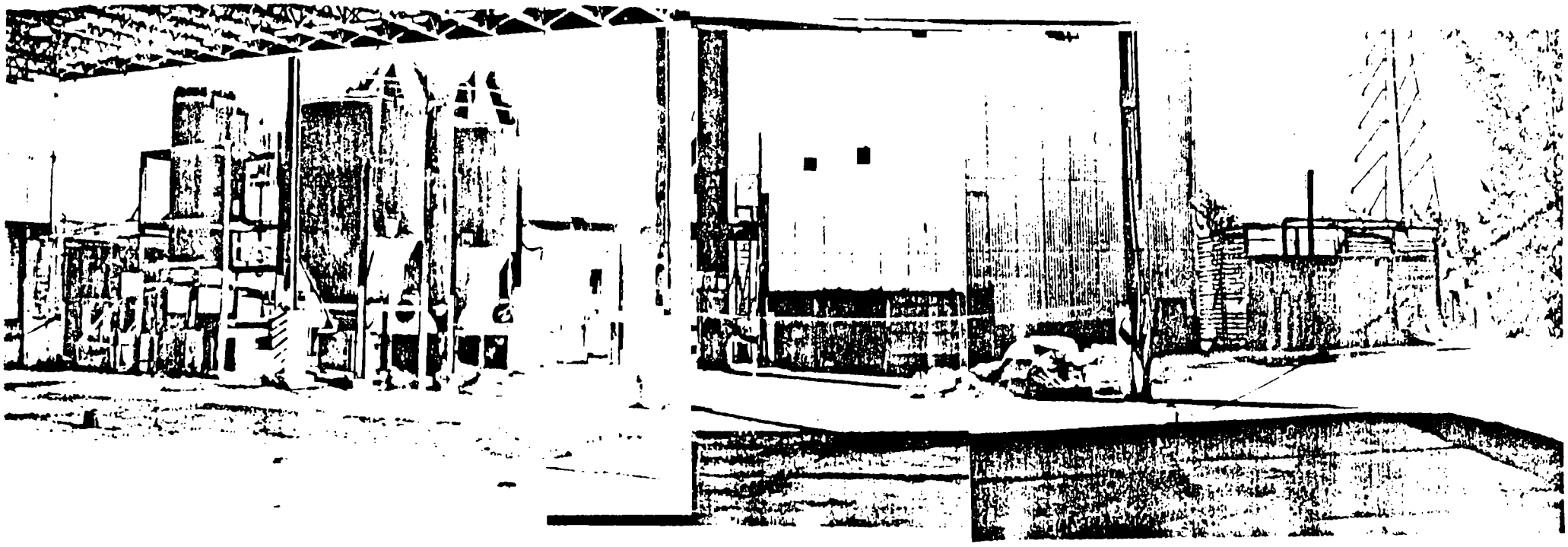
Enclosure

ATTACHMENT A

Photographs
Taracorp Industries Site
McCook, Illinois
August 1986



PANORAMA 1: TARACORP, McCook, IL. Concrete pad composite sample area. Driveway in the lower left photo heads north out of the site. The loading bays in the upper right photo lead due east towards the furnaces. (Photo by Scoville, 1030-1230, 8/28/86.)



PANORAMA 2:
TARACORP, McCook, IL.
Samples were collected of the water in the puddle in the lower series of photos and the water in the cooling tower in the upper right photo. A clogged drainage grate leads out of the puddle in the lower left photo. (Photo by Scoville, 1030-1230, 8/28/86.)

PHOTOGRAPH 3: TARACORP, McCook, Il.
TAT members Lorenz and Babusukumar prepare a composite sample of the concrete pad shown in Panorama 1. Mr. Ron Stoker of Moreco Energy, Inc., observes as George Webb of Taracorp and Walter Francis from the U.S. EPA peer into the interior of the building. Note the sign on the wall advising the use of respirators.
(Photo by Scoville, 1030-1230, 8/28/86.) 2 AS

PHOTOGRAPH 4: TARACORP, McCook, Il.
TAT member Lorenz samples a high traffic area west of the concrete pad on the driveway. Caution sign indicates that the area is restricted due to the storage of hazardous wastes.
(Photo by Scoville, 1030-1230, 8/28/86.) 2 2S

PHOTOGRAPH 5: TARACORP, McCook, Il.
TAT member Babusukumar walks southwest towards a manhole cover near the cooling tower. A soil sample was collected in the southwest corner of the Taracorp property near a drainage ditch.
(Photo by Scoville, 1030-1230, 8/28/86.) 7.13

PHOTOGRAPH 6: TARACORP, McCook, Il.
Most of the cooling tower had been demolished. The water in the area on the other side of the wood panels was approximately 3 feet deep. East of the cooling tower was the bag room, which is shown on the left side of the photo.
(Photo by Scoville. 1030-1230. 8/28/86.) 7.14

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY MEMORANDUM

DATE: June 9, 1983

TO: Lynn Crivello

FROM: Division File

SUBJECT: L03100000 - Cook County - McCook/Terra Corp.

On March 29, 1933, we received information from Mel Villalobas and Rico Vallejera of the Division of Air Pollution Control, Maywood Office, that a company called Terra Corp. located in McCook was storing lead scrap waste in a two sided building with a dirt floor. On that date, I accompanied Mr. Vallejera to the plant to check their compliance with the 700 series hazardous waste regulations. My inspection of the facility revealed that the lead scrap was stored on a concrete pad which did have a coating of dust and dirt on it. I did not observe any cracks in the concrete surface due to the fact that there was a quarter inch or more of dirt and dust on the floor. I found that the facility was exempt from the hazardous waste regulations due to the fact that they reclaim lead and the waste is hazardous by characteristic only. Rule 721.106 states " ... a hazardous waste which meets any of the following criteria is not subject to regulation under Parts 722 through 725 or 40 CFR Parts 122 through 124 and is not subject to the notification requirements of Section 3010 of RCRA.

1) It is being beneficially used on reused or legitimately recycled or reclaimed.

2) It is being accumulated, stored or physically, chemically or biologically treated prior to beneficial use or reuse or legitimate recycling or reclamation.

On May 9, 1983, during a conference call in which Maywood Land and Air Division personnel participated, Mr. Vallejera of the Air Pollution Division stated that he was concerned about possible soil contamination due to the fact that the area between the lead scrap storage area and the furnace had a graveled surface. It was decided during the conference call that I would return to Terra Corp. to sample the gravel and also check for violations of Chapters 7 and 9.

On May 26, 1983, I returned to Terra Corp. This inspection revealed that the area between the storage area and the furnace was a concrete surface with a sump in the center. The site operator told me that water ponded on the concrete pad is left to evaporate. An MSD storm drain was located west of the pad. I took one sample of the water ponded on the concrete pad south of the lead storage area and one sample of the dust on the concrete near the MSD storm sewer. I also checked the site for compliance with Chapters 7 and 9. I found that flue dust from Granite City was shipped to the facility without accompanying IEPA manifests. In addition, the facility did not have a Chapter 7 operating permit or the required supplemental special waste permits.

After the inspection, I contacted Al Gedritis of the Metropolitan Sanitary District. He told me that they have had many problems with high amounts of lead being discharged to the MSD sewer from Terra Corp. He added that in the past Terra Corp. was required to construct small berms to keep contaminated water from running off the site. It was Mr. Gedritis' opinion that during heavy rains it would be possible for the water level to rise above the containment systems.

I found out during the May 26, 1983 inspection that Terra Corp. is not operating at this time. The site operator is at the facility during the time that they are down, however, he did not know when or if they would start up again. If the facility closes down we should inspect the area to insure that all contaminated materials have been removed.

LAC:pgb

cc: Northern Region
Monte Nienkerk, DLPC
Sy Levine, DAPC
Don Gimbel, Enforcement Programs
Peter Orlinsky, Enforcement Programs
Bob Sharpe, DAPC

ecology and environment, inc.
CHICAGO, ILLINOIS

TELEPHONE LOG

REFERENCE

CONTACT	COMPANY or AGENCY	POSITION
Mr. Dick West	City of Lyons Water Supply	Manager

CONTACT ADDRESS	CONTACT PHONE NUMBER
City of Lyons IL	(708) 447-8886

E&E EMPLOYEE	DATE	TIME
Linda Knorz	6/23/95	1115

PROJECT NUMBER	SITE NAME and LOCATION
2T30.1	Taracorp Industries/McCook, IL

DISCUSSION

Mr. West stated that the City of Lyons water is supplied by Chicago Water System (i.e. Lake Michigan). Mr. West also stated that the last ~~well~~ groundwater well was put out of commission in 1956 for the city of Lyons.

SIGNATURE Linda Knorz

PAGE 1 OF 1

APPENDIX B

REFERENCE DOCUMENTATION

ecology and environment, inc.
CHICAGO, ILLINOIS

TELEPHONE LOG

REFERENCE

CONTACT	COMPANY or AGENCY	POSITION
Richard Finley	IEPA - Land Division Maywood, IL	

CONTACT ADDRESS	CONTACT PHONE NUMBER
IEPA - Maywood, IL	(708) 338-7900

E&E EMPLOYEE	DATE	TIME
Linda Knorz	6/27/95	8:30

PROJECT NUMBER	SITE NAME and LOCATION
2T3051 F1L02154.A	Taracorp Industries

DISCUSSION

I'm trying to speak with Donna Czech who was on vacation for two weeks, & spoke with her Supervisor Richard Finley.

Mr. Finley stated that J + F Hauling now owns the property at 7753 W. 47th Street. Mr. Finley believes J + F Hauling bought the property from Taracorp Industries sometime in 1990. J + F Hauling uses the site for demolition work, no ~~[illegible]~~ regulated wastes are used at the site, no special wastes permits are required. Mr. Finley also stated the J + F Hauling owner was aware of the previous owners lead contamination problem.

SIGNATURE Linda Knorz

PAGE 1 OF 1